

TITLE

[0001] Orientation Indicator System

FIELD OF INVENTION

[0002] This invention relates generally to indicia intended to convey orientation information to a person in close proximity to the display medium. This invention relates particularly to utilizing reference markers to convey orientation information of an object to a person using that object.

BACKGROUND

[0003] Typically, improper orientation of an object during use can result in wasted time, physical injury, and property damage. Take for example the case of a person spraying insecticide or paint with a spray bottle. If a person inadvertently sprays the contents at him- or herself, the user could be harmed. It would be desirable to easily determine the proper orientation of the spray bottle prior to spraying. For another example, use of a spray bottle when the valve orientation is in a closed position results in wasted time as the user struggles to produce an open valve orientation. Furthermore, the bug spray bottle user may very easily break off the spray handle as a result of squeezing the handle while the valve is oriented in a closed position. Even worse, if a spray bottle of hazardous substance is unknowingly left with the valve orientation in an open position, small children could very easily suffer physical harm by handling the bug spray bottle and discharging the hazardous chemicals inside. It would be desirable to easily determine the proper orientation of the valve. As a result, development of a simple and convenient orientation indication system is highly desirable.

[0004] A primary object and feature of the present invention is to provide a system for improved orientation indication where proper orientation is essential for safe and effective use of an object. It is a further object and feature of the present invention to provide such an orientation indication utilizing reference markers, and preferably those reference markers are universally understood,

such as facial indicia. Another object of the present invention is to provide such a system that is substantially visible when proper orientation exists between an object and a user. Other objects and features of this invention will become apparent with reference to the following descriptions.

SUMMARY OF THE INVENTION

[0005] The present invention is an apparatus and method for improved orientation indication where proper orientation is essential for safe and effective use of an object. Reference markers are applied to a display and are used to convey orientation information. A reference marker becomes visible when conditions of proper or improper orientation exist. Preferably approving facial expressions are used to indicate proper orientation and non-approving facial expressions are used to indicate improper orientation.

BRIEF DESCRIPTION OF THE DRAWINGS

- [0006] FIG. 1 is a perspective view of the indicator system employing a notepad.
- [0007] FIG. 2 is a perspective view of the indicator system according to a preferred embodiment of the present invention.
- [0008] FIG. 3 is a perspective view of the indicator system according to another embodiment of the present invention.
- [0009] FIG. 4 is a top view of a valve embodying the present invention.
- [0010] FIG. 5 is a top view of a valve, repositioned with respect to FIG. 4, according to another embodiment of the present invention.
- [0011] FIG. 6 is a side view of a spray bottle.
- [0012] FIG. 7 is a rear view of the spray bottle, implementing the present invention.
- [0013] FIG. 8 is a front view of the spray bottle, implementing the present invention.
- [0014] FIG. 9 is a plan view of smiling facial indicia of the present invention.

[0015] FIG. 10 is a plan view of frowning facial indicia of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

[0016] FIG. 1 is a perspective view of a notepad employing the present indicator system **100**, which comprises a display **104** and a reference marker **142**. In this example, display **104** is properly oriented when bound edge **144** of the notepad is facing away from the user. Reference marker **142** is substantially visible when proper orientation of the notepad exists, as shown in FIG. 1, indicating to a system **100** user that display **104** is properly oriented. Preferably the reference marker is of a color that differs from that of the display, so as to be conspicuous. In FIG. 1, reference marker **142** is a bar of darker color than the notepad. Under appropriate circumstances, considering issues such as manufacturing, cost, style, etc., other reference markers **142**, such as faces, lines, dots, stars, hearts, circles, and other shapes etc., in the same and other locations and colors, may also suffice.

[0017] FIG. 2 is a perspective view of the indicator system according to a preferred embodiment of the present invention. System **100** utilizes universally-recognized reference markers comprising facial indicia that indicate approval when the system is oriented properly, and such indicia are referred to herein as approving facial indicia. The facial indicia are substantially visible when proper orientation exists between an object and a user, as shown in FIG. 2. Preferably, the approving facial indicia comprise one or more smiling facial indicia, commonly referred to as a smiley face **106**, which further comprises a smiling mouth **130**, as an upwardly curved line, and two dotted eyes **132**, as shown in FIG. 2. Under appropriate circumstances, considering issues such as the nature of the object being oriented, cost, culture, etc., other mouths such as round, grinning, teeth, etc., may suffice for the smiling mouth. Similarly, winking, wide open, glancing, closed, etc., and other eyes may suffice for the eyes.

[0018] Display **104** is any visible surface related to an object requiring proper orientation in order to be used safely or effectively. Preferably, display **104**

comprises an essential portion of the object being oriented, however, non-essential portions, such as an extraneous object in the vicinity of the object being oriented (which may improve visibility of facial indicia), may also serve as display **104**.

[0019] Preferably, display **104** is a notepad **114**, as shown in FIG. 2. Preferably the notepad **114** comprises Post-It® notes. Post-It® notes are sheets of paper having repositionable adhesive along one edge, which may be bound together by their own adhesive. They are available commercially from the 3M Corporation. For typical use, notepad **114** is properly oriented when bound edge **116** faces away from the user. Under appropriate circumstances, considering issues such as style, cost, market demand, etc., other notepads **114**, such as round, heart-shaped, non-rectangular, non-sticky, etc., may suffice.

[0020] FIG. 3 is a perspective view of the indicator system according to another embodiment of the present invention. System **100** utilizes reference markers comprising facial indicia that indicate disapproval when the system is oriented improperly, and such indicia are referred to herein as non-approving facial indicia. The non-approving facial indicia are substantially visible when improper orientation exists between an object and a user, as shown in FIG. 3. Preferably, the non-approving facial indicia comprise one or more frowning facial indicia. Preferably, the frowning facial indicia comprise a frowning mouth **134**, as a downwardly curved line, and two blitzed eyes **136** as shown in FIG. 3. Under appropriate circumstances, considering issues such as the nature of the object being oriented, cost, culture, etc., other mouths such as straight, smirking, round, tongue stuck out, etc., may suffice for the frowning mouth. Similarly, pouting, wide open, glancing, closed, with furrowed brows, etc., may suffice for the blitzed eyes.

[0021] FIG. 4 is a top view of a valve embodiment of the present invention. The display comprises valve **120** for manipulating fluid flow. Valve **120** provides for open and closed orientations, and such is communicated utilizing facial indicia. Valve **120** is rotatable, and the facial indicia are applied across the plane of rotation, which enables the displayed facial indicia to change depending on the valve orientation. For an approved fluid flow, the approving facial indicia **102** are

visible to the user, as the lower portion **110** of the facial indicia comprising the smile mouth is aligned under the dotted eyes, as in FIG. 4. FIG. 5 is a top view of the valve, repositioned with respect to FIG. 4, and indicating a non-approved fluid flow. In FIG. 5, the non-approving facial indicia **105** are visible, as the lower portion **112** of the facial indicia comprising the frowning mouth is aligned under the dotted eyes. Under appropriate circumstances, considering issues such as flow function, cost, manufacturing, etc., other displays **104**, such as thresholds, lids, doors, closers, etc., may be used as the display.

[0022] FIG. 6 is a side view of a spray bottle employing the present invention, which is example of an aimable object requiring proper orientation between an object and a user in order to be safe and effective. Display comprises spray bottle **191**, which further comprises valve **190** from which the spray emanates. Other aimable objects include, but are not limited to, guns, nozzles, canisters, non-spray bottles, etc.

[0023] FIG. 7 shows the back side of spray bottle **191** which, assuming that spraying oneself is undesirable, should substantially face the user when the spray bottle is in use. Therefore, approving facial indicia are applied to this proximal side of the spray bottle **191** to indicate to a user that the user is aiming in a proper direction. That is, when the user orients the smiley face **192** towards him- or herself, the spray will emanate from the other side of the spray bottle **191**, away from the user. Frowning facial indicia **194** may be applied to the distal side of the spray bottle **191** to indicate to a user that, when the user sees the frowning indicia, the user is aiming in an improper direction. Of course, if the user desires to spray him- or herself, the smiley face would be on the side from which the spray emanates.

[0024] FIG. 9 shows one version of a smiley face **106**. FIG. 10 shows one version of frowning facial indicia **108**.

[0025] Although the above descriptions provide applicant's preferred embodiments of this invention, it will be understood that the broadest scope of this invention includes such modifications as diverse shapes and sizes, as well as diverse materials and colors. In addition, equivalents may be substituted for

elements thereof without departing from the true scope of the invention. Such scope is limited only by the below claims as read in connection with the above specification. Furthermore, many other advantages of applicant's invention will be apparent, to persons of ordinary skill in the art, as a result of the above descriptions and as a result of the below claims.